ERIOPHYID STUDIES B-4

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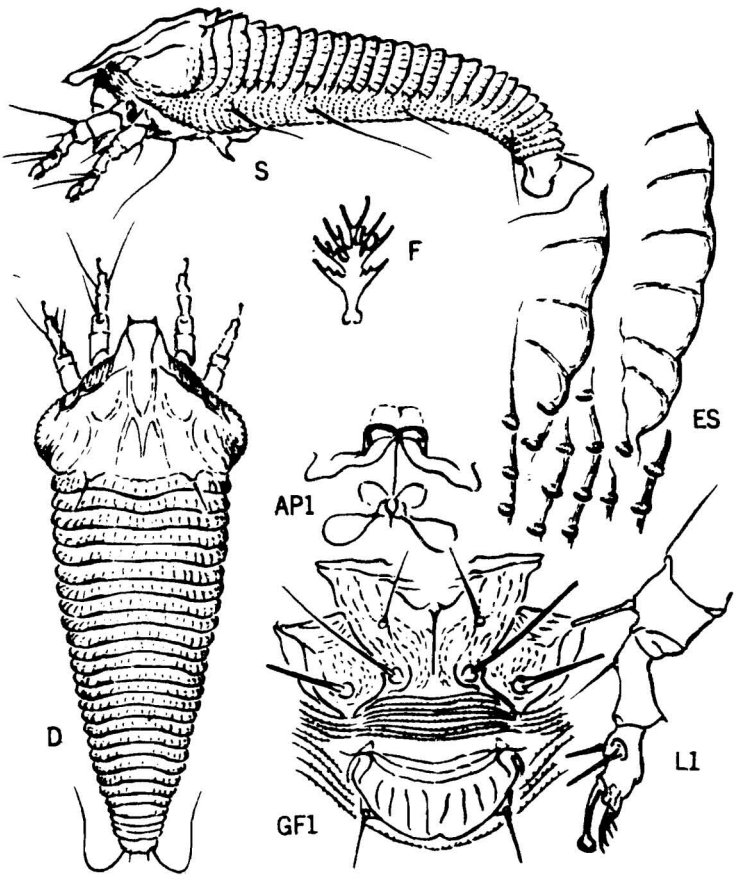

Plate 1 - Platycelus pyramidicus, new species

ISSUED - Dec. 4, 1961

Plataculus, new genus

The genotype differs from typical Aculus spp. by the possession of a broad longitudinal dorsal trough, and from Tetra spp. by the pair of small anterior shield lobe spines.

Body flattened-fusiform, widest across shield. Rostrum short, projecting down; apical recurved portion of oral stylet short. Cephalothoracic shield subtriangular; anterior lobe over rostrum prominent, rounded, with anterior pair of small spines; dorsal setae on rear shield margin, with transverse axes; dorsal setae diverging to rear. Abdomen with tergites broader and less numerous than sternites; with broad longitudinal dorsal trough, fading to rear. Tergites with microtubercles elongate; sternites with bead-like microtubercles, on rear margins. All usual leg, coxal and abdominal setae present. Anterior coxae broadly contiguous centrally. Female genitalia set moderate distance behind coxae; interior apodeme normal anterior length.

Genotype: Plataculus pyramidicus, new species

Plataculus pyramidicus, new species

Plate 1

Female 160u-175u long, 60u-65u wide, 35u-40u thick; lateral shield lobes projecting beyond body line; color light yellowish-amber. Rostrum 26u long, projecting down; antapical seta 7u long. Shield 52u long, 65u wide. subtriangular; design unclear: broad admedian lines faintly indicated, diverging lines running above central lateral margins; lateral lobes roughened, rounded. Dorsal tubercles 33u apart; dorsal setae 6.5u long. Forelegs 31u long; tibia 6.5u long, with seta 4u long, from 1/3; tarsus 6.5u long; claw 6u long, somewhat curved, with large terminal knob; featherclaw 4-rayed. Hindlegs 31u long, tibia 6.5u long, tarsus 7u long, claw 6.5u long. Coxae ornamented with lines of granules and short dashes; anterior coxae broadly connecting centrally with a moderately long sternal line junction; first setiferous coxal tubercles behind anterior coxal junction, farther apart than second tubercles; second tubercles but slightly ahead of transverse line through third tubercles. Abdomen with about 27 tergites, and 60-70 sternites. Tergites with usually faint elongate microtubercles; sternites with elliptical microtubercles projecting slightly beyond rear margins. Lateral seta 18u long, on about sternite 10; first ventral seta 26u long, on sternite 21; second ventral 16u long, on sternite 40; third ventral 18u long, on sternite 4 from rear. Accessory seta 4.5u long. Female genitalia 23u wide, 17u long; coverflap with about 8 longitudinal ribs; genital seta 14u long.

Type locality: Pyramid Creek, Twin Bridges, El Dorado County, Cal.

Collected: August 21, 1960 by the writer

Host: Sorbus californica Greene (Rosaceae) mountain ash

Relation to host: the mites inhabit the upper surfaces of the leaves and as well as rusting them cause upcurling of the edges.

Type material: as well as specimens in liquid, there is a type slide and four paratype slides.

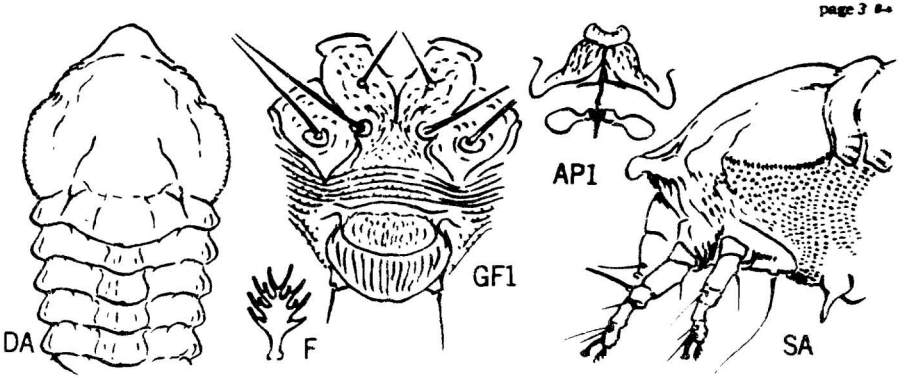

Plate 2 - Oxypleurites solidaginis, new species

Oxypleurites solidaginis, new species

Plate 2

Solidaginis is distinguished by the very short dorsal setae combined with the dorsal longitudinal ridge and the 4-rayed featherclaw.

Female 170u-190u long, 56u wide, 45u thick; fusiform with widest dimension across the shield; color light amber. Rostrum 20u long, projecting down; antapical seta 8u long. Shield 50u long, 56u wide; anterior lobe over rostrum broad and blunt; design obsolete; lateral lobes broad and curving, outer edge roughened with granules below; dorsal tubercles 27u apart; dorsal setae 4.5u long. Forelegs 29u long; tibia 8.5u long, with seta 2.5u long at 1/3; tarsus 6u long; claw 6.5u long, curved, knobbed apically; featherclaw 4-rayed. Hindlegs 27u long, tibia 8u long, tarsus 6u long, claw 6.5u long. Coxae with lines and granulations; first setiferous coxal tubercles slightly farther apart than second tubercles and slightly behind anterior coxal junction; second setiferous tubercles slightly ahead of transverse line through third tubercles. Abdomen with about 17 tergites; a middorsal longitudinal abdominal ridge; lateral tergal lobes short and blunt; tergites laterally with faint elongate microtubercles. About 50-55 sternites, completely microtuberculate the microtubercles reaching rear ring margins; microtubercles rounded apically, more elongate toward cauda. Lateral seta 13u long, on about sternite 5; first ventral seta 18u-20u long, on about sternite 20; second ventral 8.5u long, on about sternite 34; third ventral 16u long, on sternite 5 from rear. Accessory seta 2.5u long. Female genitalia 18u wide, 16u long; coverflap basally with numerous longitudinal dashes, and about 14 longitudinal ribs; genital seta 7.5u long.

Male 155u-165u long, 50u wide, 40u thick.

Type locality: Greenbelt, Maryland

Collected: August 2, 1959 by J. P. Keifer and the writer

Host: Solidago sp. (Compositae-Astereae) goldenrod

Relation to host: the mites lie in the vein grooves on the upper sides of the leaves.

Type material: there is a type slide and 7 paratype slides, and mites with leaves in liquid and in dry envelopes.

In addition to the above specimens this mite was collected in John Bryant Park, Yellow Springs, Dayton district, Ohio, October 25, 1960 by J. P. Keifer and the writer. The host was again a species of Solidago.

Acaricalus paralobus, new species

Paralobus is distinguished by the network shield pattern with wide central lines, by the 4-rayed divided featherclaw, and by the low narrow central abdominal ridge.

Female 195μ-250μ long, 65μ-70μ wide, 85μ thick; fusiform; dull yellowish in color. Rostrum 30μ long, projecting down; antapical seta 6.5μ long. Shield 60μ long, 63μ wide, design a network: median line missing; admedian lines complete, broader toward rear, wide on rear 2/3, joined by a cross line at 1/3, confluent just before rear margin. First submedian lines on rear 1/2, diverging toward dorsal tubercles, broad, anteriorly joining broad cross line from admedians at before 1/2. Some lateral and anterior shield cells; lateral lobes not extending beyond body margin, with heavy granules. Dorsal tubercles ahead of rear margin, longitudinal axis, 23μ apart; dorsal setae 6.5μ long, projecting up. Forelegs 46μ long; tibia 10μ long, with seta 4.5μ long, from 1/4; tarsus 7.5μ long; claw 6.5μ long, knobbed; featherclaw divided, 4-rayed. Hindlegs 35μ long, tibia 7μ long, tarsus 7μ long, claw 6.5μ long. Coxae with some lines; anterior coxae narrowly joined centrally, rather strongly divergent; first setiferous coxal tubercles ahead of and slightly farther apart than second tubercles; second tubercles well ahead of transverse line through third tubercles. Abdomen with moderately raised ridges; middorsal ridge extending caudad about 34 tergites; subdorsal ridges diverging for short distance from dorsal tubercles and then fading to rear; a slight lateral ridge from lateral shield lobes, fading to rear. About 48 abdominal tergites and 60 sternites; dorsal ridges somewhat rough, but otherwise with suppressed microtubercles; sternites with microtubercles resting on rear margins. Lateral seta 23μ long, on about sternite 7 behind shield; first ventral 20μ long, on sternite 24; second ventral 20μ long, on sternite 43; third ventral 25μ long, on about ring 5 from rear. Accessory seta minute. Female genitalia 23μ wide, 17μ long; coverflap with 10-12 longitudinal ribs; seta 22μ long.

Type locality: Auburn, Maine

Collected: August 8, 1959 by John P. Keifer

Host: Alnus rugosa DuR. (Betulaceae) speckled alder

Relation to host: the mites are undersurface vagrants on the leaves.

Type material: as well as a type slide and 4 paratype slides, there are the dry leaves from which the mites were taken.

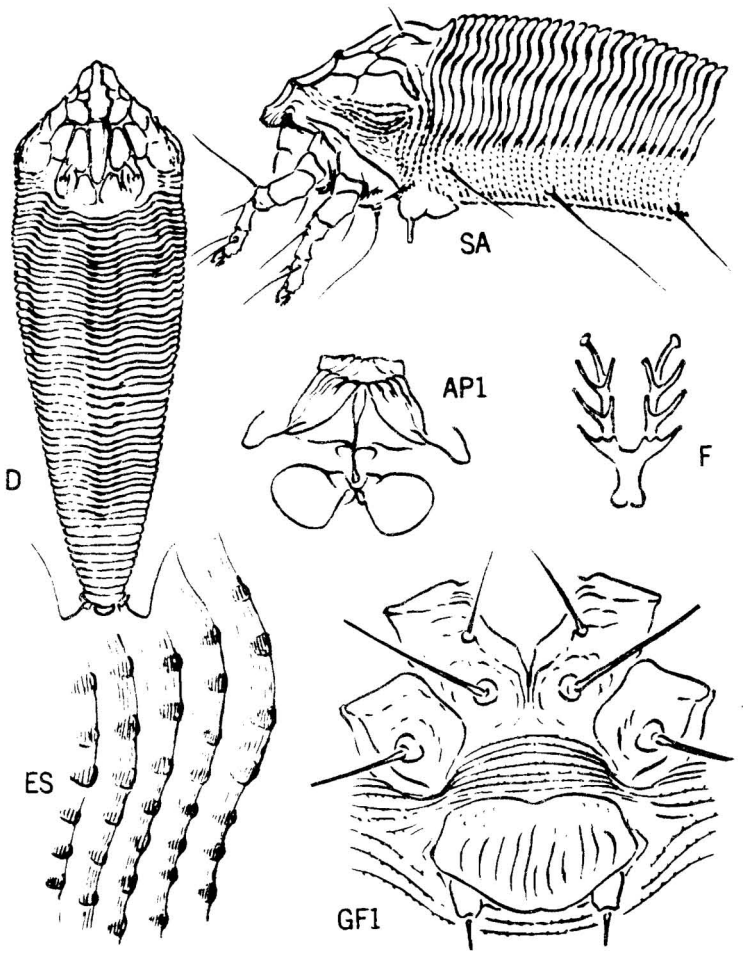

Plate 3 - Acaricalus paralobus, new species

Acaphylla distasa, new species

Plate 4

The genus Acaphylla was set up for an Epitrimerus-like mite with divided featherclaws, that damages camellia leaves. The genotype is steinwedeni K. (see Bul. Cal. Dept. Agr. 32:215, 1943). In 1954 a second species, indiae K., a damager of tea leaves, was added. Both of these species originate in southern Asia. It is therefore somewhat surprising to find a mite fitting into the generic definition of Acaphylla, infesting birch leaves in Maine. This new species, distasa, differs from the above two in having fewer rays on the featherclaw and by having coarse granulations on the lateral shield lobes. Distasus should be compared with Epitrimerus acromius Nal. of Europe. Nalepa in describing acromius was equivocal about the featherclaw.

Female 175u-190u long, 60u-65u wide, 50u thick; fusiform; brownish in color. Rostrum 23u long, projecting down; antapical seta 6u long. Shield 47u long, 62u wide; subtriangular. Anterior lobe over rostrum acuminate in dorsal view, short. Shield design weak: median line absent; admedian lines complete, sinuate, joined by V-shaped marks across at 1/2 and 4/5; transverse lines extending laterally at 1/4 and before 1/2. Lateral lobes large, extending beyond general body line, roughened with rows of coarse granules. Dorsal tubercles 23u apart, axis longitudinal, set somewhat ahead of rear margin; dorsal setae 6u long, projecting up. Forelegs 37u long; tibia 9u long, with seta 7u long from 1/4; tarsus 7.5u long; claw 6u long, knobbed; featherclaw divided, 2-rayed. Hindlegs 35u long, tibia 6.5u long, tarsus 7.5u long, claw 6u long. Coxae with lines of granules; first setiferous coxal tubercles slightly farther apart than second tubercles; second coxal tubercles ahead of transverse line through third tubercles. Central longitudinal abdominal ridge broad at rear shield margin, narrowing and fading to rear; subdorsal ridge weak, from just above lateral shield lobes, fading to rear. Abdomen completely microtuberculate, the microtubercles on rear ring margins, with fewer and larger microtubercles dorsally. Number of tergites 36-42; 60-65 sternites. Lateral seta 33u long, on about sternite 8; first ventral seta 53u long, on sternite 23; second ventral 22u long, on sternite 42; third ventral 23u long, on sternite 6 from rear. Accessory seta 2.5u long. Female genitalia with anterior granulations: 23u wide, 15u long; coverflap with 10-12 weak longitudinal ribs; genital seta 16u long.

Type locality: Auburn, Maine

Collected: August 9, 1959 by John P. Keifer

Host: Betula populifolia Marsh (Betulaceae) gray birch

Relation to host: the mites are vagrants on the undersides of the leaves.

Type material: as well as a type slide and three paratype slides, there are the dry leaves bearing mites from which the specimens were taken.

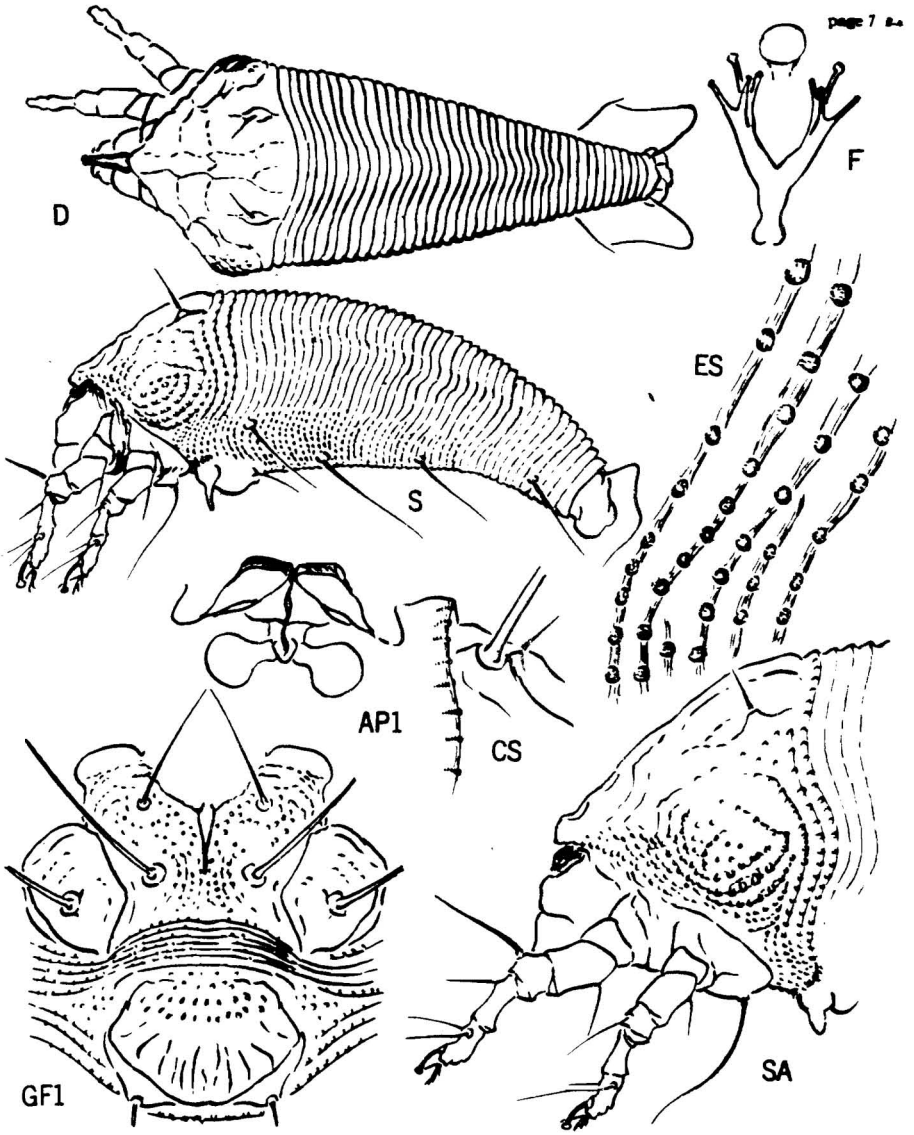

Plate 4 - Acapnylla distasa, new species

Calepitrimerus glacialis, new species

Plate 5

Glacialis is characterized by the 6-rayed featherclaw, the evenly rounded shield without lateral lobes, and the relatively weakly developed abdominal ridges. The other native Calepitrimerus on North American Thuja is occithujae K. From occithujae the new species is differentiated by having one less ray in the featherclaw, by lacking lateral shield lobes, and by less strong dorsal ridges. Other details are found on the shield and in the genital-coxal region.

Female 175u-180u long, 60μ wide, 45μ thick; elongate-fusiform; yellowish in color. Rostrum 30μ long, projecting down; antapical seta 12u long. Shield 52u long, 52μ wide; subtriangular with anterior lobe rather broad and blunt, with a transverse furrow across below upper edge. Design an open network: median line absent; admedian lines from anterior lobe, sinuate, connected by cross line at anterior third, and by V-shaped line ahead of rear margin. A sinuate submedian line from lateral anterior margin of shield, running back to dorsal tubercles. Lines forming a lateral row of cells on sides, with granules above coxae. Lateral lobes not projecting. Dorsal tubercles 23u apart, ahead of rear margin; dorsal setae 10u long, projecting up. Forelegs 31u long; tibia 7u long, with seta 7μ long, from about 1/2; tarsus 7u long; claw 8.5u long, curved, slightly knobbed; featherclaw 6-rayed. Hindlegs 28u long, tibia 6.5u long, tarsus 6.5u long, claw 8.5u long. Anterior coxae narrowly connate centrally. First coxal tubercles near anterior end of coxae, far ahead of coxal junction; second coxal tubercles ahead of transverse line through third tubercles. Abdomen with about 54 tergites and 76-80 sternites; central longitudinal ridge weak, ending about tergite 37 or 38; sternites completely microtuberculate, the microtubercles fading dorsally; edges of ridges roughened. Lateral seta 44u long, on about sternite 7; first ventral seta 35u long, on about sternite 24; second ventral 23u long, on about sternite 45; third ventral seta 26u long, on ring 6 from rear. Accessory seta 5u long. Female genitalia 25u wide, 17u long; coverflap with some basal short marks and 6 or 8 diagonal ribs running centrad to rear; genital seta 12u long.

Type locality: McDonald Lake, Glacier National Park, Montana

Collected: July 2, 1960 by the writer

Host: Thuja plicata Donn (Cupressaceae) western redcedar

Relation to host: the mites are vagrants on the foliage

Type material: as well as a type slide and two paratype slides, there are mites in liquid with foliage.

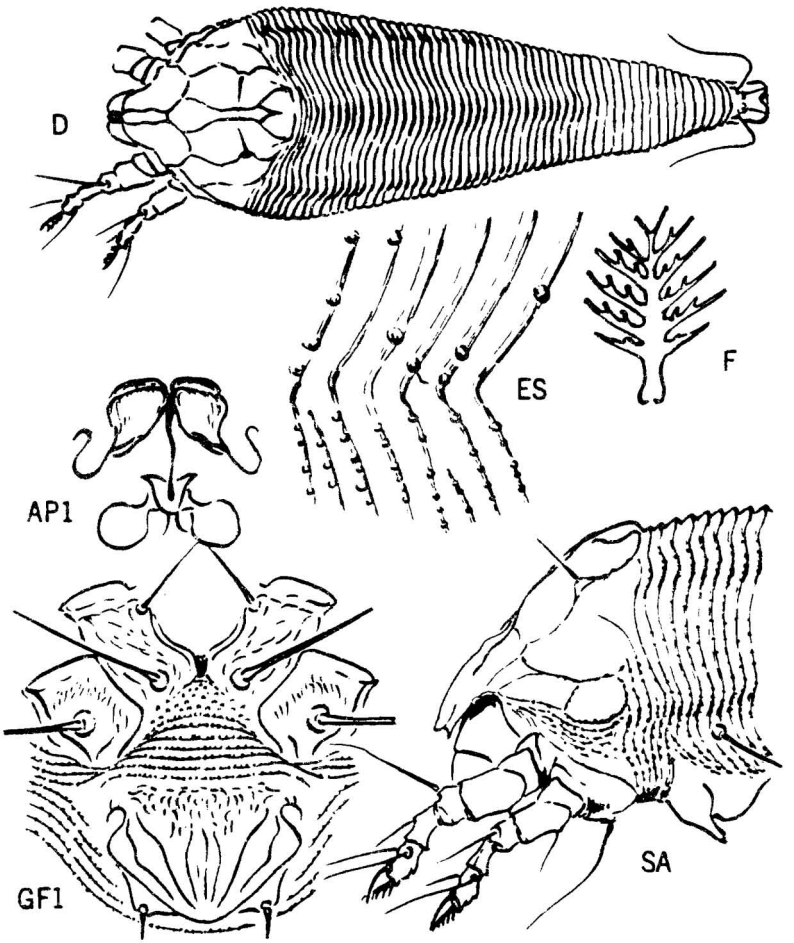

Plate 5 - Calopitrimerus glacialis, new species

Phyllocoptes lapiflavi, new species

Plate 6

This Phyllocoptes is distinct by the emarginate anterior lobe of the shield which is knotched both vertically and horizontally. The 6-rayed featherclaws and the pointed microtubercles are also important characters.

Female 170u-205u long, 50u wide, 43u thick; fusiform; color light yellowish-white. Rostrum 20u long, projecting down; antapical seta 8u long. Shield 50u long, 43u wide; anterior lobe broad and rounded, the center knotched in dorsal view and emarginate in lateral view; median line complete from center knotch to rear margin, meeting cross or curved lines at 1/3 and 2/3; admedian lines complete, beginning at sides of anterior knotch and curving back to submedian cross line at 1/3, curving out and caudad from this line and recurving centrally to median line at 2/3, from there abruptly curving outward and recurving to rear margin; submedians curving out from median line at 1/3, then turning caudad and running past dorsal tubercle base to rear margin; a lateral line above lateral shield margin and granulations below this margin. Dorsal tubercles well ahead of rear margin, 20u apart; dorsal setae 16u long, projecting up and centrad. Forelegs 33u long; tibia 6.5u long, with seta 6.5u long from 1/2; tarsus 9u long; claw 8.5u long, curved, tapering; featherclaw 6-rayed. Hindlegs 32u long, tibia 6.5u long, tarsus 9u long, claw 9.5u-10u long. Anterior coxae broadly connate centrally, with curved lines and granulations; first setiferous coxal tubercles set well ahead and farther apart than second tubercles, ahead of anterior coxal junctfon; second setiferous coxal tubercles ahead of transverse line through third tubercles; rear coxae with curved line framing basal part. Abdomen with about 47 tergites and 65 sternites, the tergites slightly heavier than sternites; completely microtuberculate, the microtubercles on ring margins, pointed, more elongate dorsally but less conspicuous. Lateral abdominal seta 27u long, on about sternite 8; first ventral seta 52u long, on about sternite 23; second ventral 50u long, on sternite 40; third ventral 20u long, on sternite 5 from rear. Accessory seta 4u long. Female genitalia 20u long, 16u wide; coverflap with 2 or 3 rows of basal granulations, and about 12 longitudinal ribs; genital seta 29u long.

Type locality: Firehole Lake, Yellowstone National Park, Wyoming

Collected: July 5, 1960 by the writer

Host: Fragaria prolifica B. & R. (Rosaceae) a strawberry

Relation to host: the mites are undersurface leaf vagrants

Type material: as well as a type slide and four paratype slides there are mites and leaves in liquid.

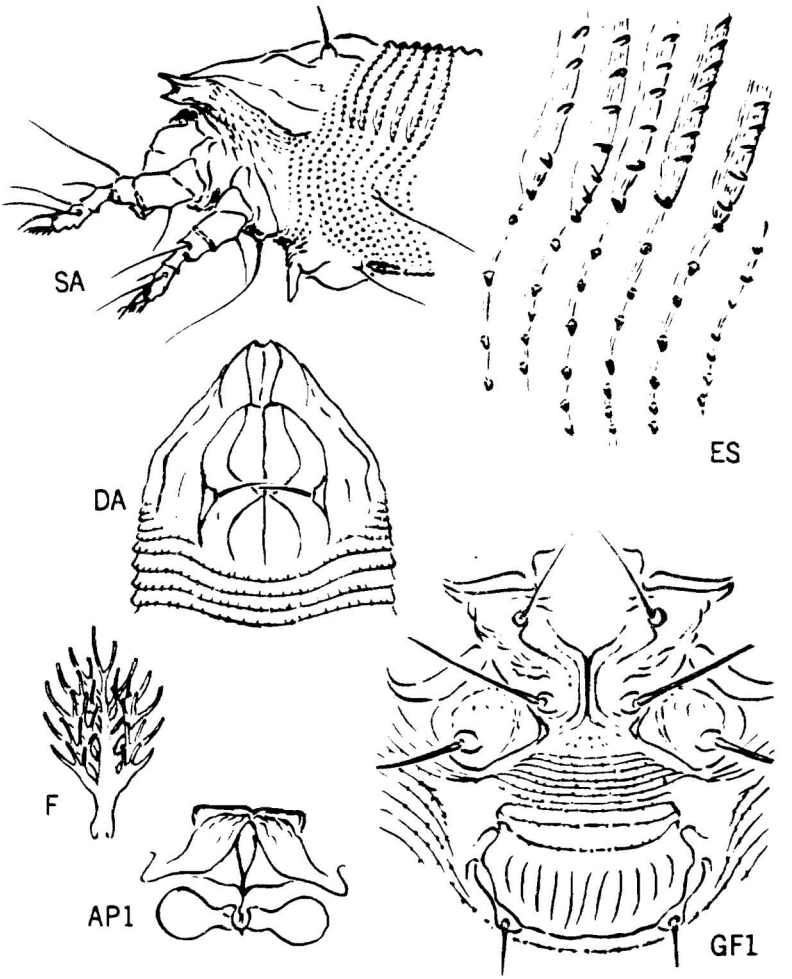

Plate 6 - Phyllocoptes lapiflavi, new species

Rhyncaphytoptus amplus, new species

Plate 7

The dorsal tubercles on the shield of this species project up from a position just ahead of the rear margin, and the setae project up, curving anteriorly and diverging. The subapical sensillum on the rostrum is minute. Other important characters are the 6-rayed featherclaw and the basal diagonal lines on the base of the genital coverflap.

Female 156μ-216μ long, 62μ thick; robust-fusiform; light yellowish in color. Rostrum 53μ long, projecting down; antapical seta 5μ long; subapical sensillum almost absent. Shield 43μ long, 48μ wide; no anterior lobe; design a network: median line complete, ending at cross line from admedians just ahead of shield margin; admedians complete, sinuate, with cross line to median at 1/4, at about 1/2, and at about 3/4; three large cells partly enclosed ahead of and lateral to dorsal tubercles; front and lateral shield margins with row of elongate cells. Dorsal tubercles 23μ apart, just ahead of rear margin, projecting up; dorsal setae 40μ long, curving up and diverging anteriorly. Forelegs 43μ long; tibia 10.5μ long; claw 6.5μ long, knobbed; featherclaw 6-rayed. Hindlegs 38μ long, tibia 8μ long, tarsus 10μ long, claw 6.5μ long. Coxae with transverse wrinkles; anterior coxae narrowly joined centrally and with anterior lobes at junction; first setiferous coxal tubercles ahead of anterior junction and farther apart than second tubercles; second tubercles a little ahead of transverse line through third tubercles. Abdomen with tergites nearly as numerous as sternites, about 60 rings; completely microtuberculate, the microtubercles less numerous and more beadlike dorsally, more elongate ventrally, resting on rear ring margins. Lateral seta 20μ long, on about sternite 15; first ventral seta 46μ long, on about sternite 29; second ventral 10μ long, on about sternite 42; third ventral 16μ long, on sternite 7 from rear. Accessory seta 2.5μ long. Female genitalia 40μ wide, 22μ long; coverflap with basal diagonal lines and about 16 longitudinal ribs to the rear beyond these; genital seta 7μ long.

Type locality: College Park, Maryland

Collected: July 16, and 22, 1959 by J. P. Keifer and the writer

Host: Acer platanoides L. (Aceraceae) Norway maple

Relation to host: the mites are undersurface leaf vagrants, possibly causing mild rusting.

Type material: as well as a type slide dated July 16, and six paratype slides, there are envelopes with dry leaves from which the slides were made.

In Technical Bulletin #163 of the New York State Agricultural Experiment Station, on page 38, 1930, H. E. Hodgkiss describes and depicts what he calls Phyllocoptes magnificus on Norway maple. This mite could be a Rhyncaphytoptus, as amplus is, but Hodgkiss' figure shows the dorsal setae as directed to the rear. All species of Rhyncaphytoptus have dorsal setae that project forward in some degree. In order to put magnificus into Rhyncaphytoptus it is necessary to assume that Hodgkiss' figure is incorrect. In addition, Hodgkiss states that there are 42 smooth, wide, 'striae' on the dorsum of magnificus. The species herein described as amplus has about 54 tergites bearing weak microtubercles.

In this same Technical Bulletin Hodgkiss also treats what could be two other species of Rhyncaphytoptus. These are constrictus Hodg. on sugar maple, and splendidus Hodgk. on boxelder. The first, constrictus, looks like a robust species of Rhyncaphytoptus, if we can turn the dorsal setae around, but splendidus is not so easily reinterpreted. In these cases, and probably in others, any attempt to understand Hodgkiss' mite species must not only be based on specimens from type localities, but there must also be careful reinterpretations of them.

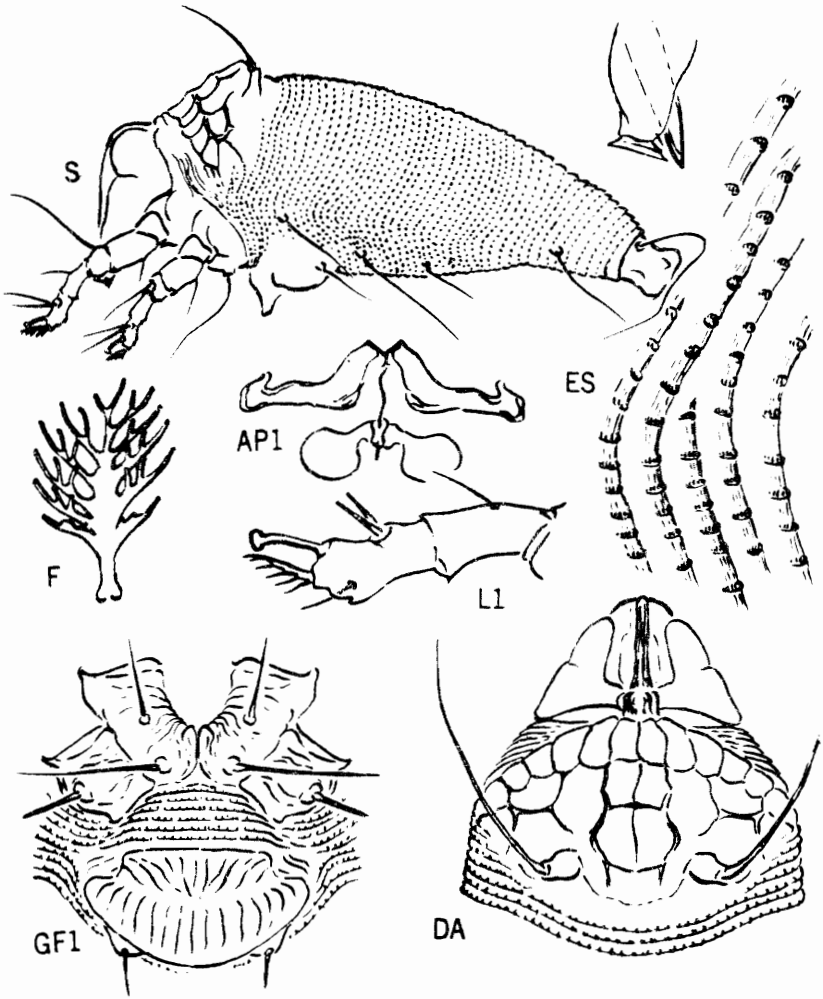

Plate 7 - Rhyncaphytoptus amplus, new species

Aceria boutelouae, new species

Plate 8

This mite is similar to neocynodonis K. but has a 5-rayed featherclaw and more granular lines on the shield. Aceria tenuis (Nal.) of Europe is also stated to have a 5-rayed featherclaw, but details of its structure such as the precise nature of the shield pattern and the exact type of microtubercles are not available.

Female 180u-240u long, 35u-40u thick; wormlike; color light yellowish. Rostrum 21u long, curved down; antapical seta 5u long. Shield 32u long, 35u wide, subtriangular in dorsal view; design with median line granular and extending from 1/5 to rear margin; admedians sinuate, subparallel to median, granular on rear 3/4, extending from chelicera base to rear margin; first submedian line from chelicera base just lateral to admedian, running directly toward dorsal tubercles but deflected laterally just ahead of tubercle, granular on rear 3/4; a second submedian line from near front of shield diverging from first submedian and recurving centrad at rear margin, mostly granular. granules and dashes between these lines; a lateral line on shield and numerous lines of granules. Dorsal tubercles 21u apart; dorsal setae 58u-60u long, diverging to rear. Forelegs 30u-35u long; tibia 7u long, with seta 8u long at 1/3; tarsus 8.5u long; claw 8.5u long, curved, tapering; featherclaw 5-rayed. Hindlegs 28u long, tibia 6.5u long, tarsus 7.5u long, claw 9u long. Coxae with lines of granules; anterior coxae broadly joined centrally, the sternal line of moderate length, a line of granules subparallel to sternal line and curving laterally behind second coxal tubercles; first setiferous coxal tubercles behind anterior junction of forecoxae and slightly farther apart than second tubercles; second tubercles a little ahead of transverse line through third tubercles. Abdomen with about 70 rings, completely microtuberculate, the microtubercles rounded and set ahead of rear ring margins. Lateral seta 50u long, on ring 7; first ventral seta 54u long, on about ring 20; second ventral 10u long, on about ring 37; third ventral 23u long, on ring 5 from rear. Accessory seta 4u-6u long. Female genitalia deep bowl shaped; 20u wide, 15u long; coverflap with about 12 more or less irregular longitudinal ribs; genital seta 18u long.

Type locality: Dateland, Yuma County, Arizona

Collected: March 9, 1961 by D. M. Tuttle

Host: Boutelous barbata Lag. (Gramineae-Chlorideae) grama grass

Relation to host: the mites live in the sheaths and curled leaves

Type material: as well as the dry grass from which the specimens were taken, there is a type slide and eleven paratype slides.

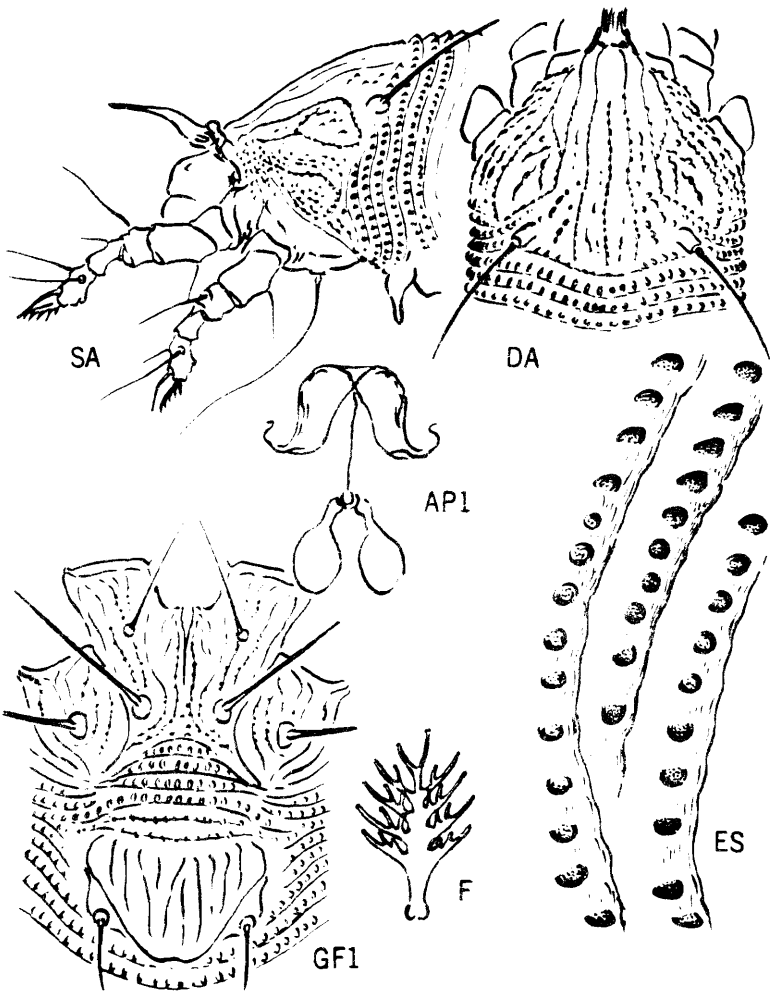

Plate 8 - Acaria boutelouae, new species

Aceria danthoniae, new species

Plate 9

The cephalothoracic shield is elongate anteriorly in this species, but unlike most other members of Aceria there is a short anterior projection over the rostrum base which is atypical for the genus.

Female 190u-216u long, 35u-38u thick; wormlike in shape; color light yellowish-white. Rostrum moderately thick, pointing diagonally down; antapical seta 7.5u long. Shield 36u long, 33u wide; elongate anteriorly with a short anterior projection over rostrum base, slightly emarginate centrally; median line present on rear 1/2; admedians complete from sides of anterior emargination, sinuate, diverging just past 1/2 and recurving to rear shield margin; a sinuate submedian line from front edge of shield running back to just before inner side of dorsal tubercle; a diagonal line across in front of dorsal tubercle; a lateral line forking above rear leg junction. Dorsal tubercles 23u apart; dorsal setae 22u long, diverging to rear. Forelegs 29u long; tibia 6.5u long, with seta 8.5u long at 1/3; tarsus 8u long; claw 7u long, curved down, tapering; featherclaw 5-rayed. Hindlegs 27u long, tibia 4.5u long, tarsus 6.5u long, claw 8.5u long. Anterior coxae moderately broadly joined, with few curved lines and granulations; first setiferous coxal tubercles farther apart than second tubercles and a little ahead of anterior coxal junction; second coxal tubercles slightly ahead of transverse line through third tubercles. Abdomen with about 60 rings, completely microtuberculate, the microtubercles round and situated bead-like on the rear ring margins except ventrally where they are a little ahead of margins. Lateral seta 36u long, on about ring 7; first ventral seta 40u long, on about ring 18; second ventral 21u long, on about ring 36; third ventral 23u long, on ring 4 from rear. Accessory seta 4.5u long. Female genitalia shallow bowl-shaped; 20u wide, 14u long; coverflap with six to eight longitudinal ribs; seta 15u long.

Type locality: Twin Bridges, El Dorado County, California

Collected: May 28, 1969 by the writer

Host: Danthonia intermedia Vasey (Gramineae-Aveneae) timber oat grass.

Relation to host: the mites are upper surface leaf vagrants.

Type material: as well as a type slide and three paratype slides, there are two vials with leaves and mites in liquid from which the slides were made.

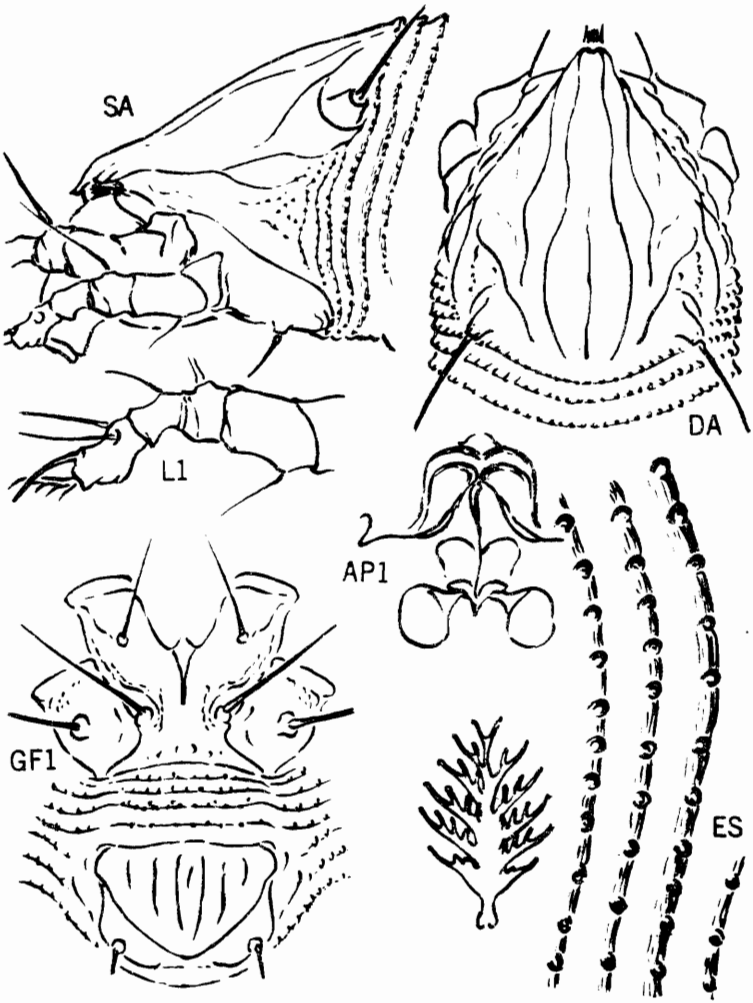

Plate 9 - Aceria danthoniae, new species

Eriophyes vauquelinlae, new species

Plate 10

The most distinctive feature of vauquelinlae is the extra long accessory seta. The shield has almost no markings and the featherclaw is 4-rayed.

Female 150μ-220μ long, 40μ-45μ thick; wormlike; yellowish-brown in color. Rostrum 24μ long, curving down anteriorly; antapical seta 4.5μ long. Shield 26μ long, 35μ wide; subtriangular in outline from above. Design obsolete except for short markings on rear margin indicating admedian lines and a submedian line; laterally the shield has curved rows of granules. Dorsal tubercles 20μ apart, projecting forward from rear margin; dorsal setae 16μ long, diverging to rear. Forelegs 30μ long; tibia 4.5μ long, with seta 6.5μ long at 1/3; tarsus 6μ long; claw 6.5μ long, featherclaw 4-rayed. Hindlegs 24μ long, tibia 3.5μ long, tarsus 6μ long, claw 7μ long. Coxae with a few granules; anterior coxae joined centrally; first setiferous coxal tubercles ahead of second tubercles and slightly behind anterior coxal junction; second tubercles well ahead of transverse line through third tubercles. Abdomen with about 50-55 rings, completely microtuberculate, the microtubercles larger dorsally, smaller ventrally, somewhat produced but blunt; microtubercles slightly ahead of rear ring margins. Lateral seta 23μ-26μ long, on about ring 5 behind shield; first ventral about 36μ long, on ring 19; second ventral 12μ long, on ring 29; third ventral 14μ long, on ring 5 from rear. Accessory seta 12.5μ long. Female genitalia 20μ wide, 13μ long; coverflap with about 12 longitudinal ribs; seta 10μ long.

Type locality: The Basin, Big Bend National Park, Texas

Collected: October 31, 1960 by the writer

Host: Vauquelinia angustifolia (Rosaceae)

Relation to host: the mites live at the bases of the leaf axils around the lateral buds.

Type material: as well as a type slide and five paratype slides, there are mites with leaves in liquid, and dry stems with mites in an envelope.

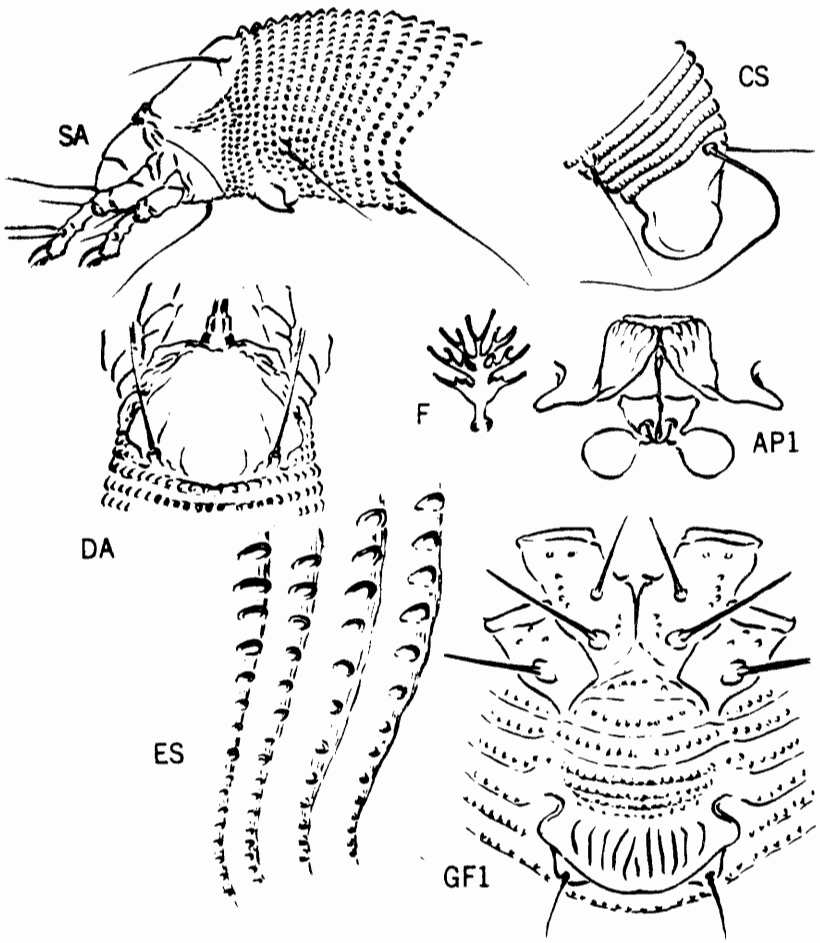

Plate 10 - Eriophyes vauquelinicae, new species

Rhyncaphytoptidae, new family

These are the "big-beaked" Eriophyids. They possess a rostrum which in form and size immediately separate all those with it from all other Eriophyids. I have discussed and illustrated the Eriophyid rostrum in Eriophyid Studies XXIV - Bul. Cal. Dept. Agr. 47(4): 278-281, 1959.

New species and genera are being continually added to the group of big-beaked mites, and since there is a discontinuity between them and other Eriophyids, it is appropriate to give them family rank. The new family is contrasted from other Eriophyids as follows:

1. Eriophyidae in a restricted sense -

Rostrum variable in size, small or large, usually small; gradually downcurved, or projecting down; first external rostral segment longer than second segment; chelicerae of various lengths, needle-like, evenly downcurved or straight;oral stylet relatively short, projecting forward from pharyngeal pump and downcurving about middle of rostrum, apical downcurved portion shorter than base plus pharyngeal pump; apical rostral segments telescoping when chelicerae inserted in plant tissue. Cephalothoracic shield with four, three, two, or not setae; when setae present they project in various directions according to generic type. Abdomen either wormlike or flattened-fusiform, the latter often with heavy back plates; anterior subdorsal abdominal setae either present or absent. Internal female genital apodeme variable in shape; female genital coverflap with or without ribs, usually with ribs. Habit: gall mites, bud mites, rust mites, leaf or green stem vagrants.

2. Rhyncaphytoptidae, new family -

Rostrum large, tapering, set at or near right angles to body axis; first external rostral segment shorter than second; chelicerae long, lancet-like, more or less abruptly bent down just ahead of base; oral stylet long, projecting up from pharyngeal pump to near chelicera base and recurving down from there,the apical downcurved portion longer than base plus pharyngeal pump; apical rostral segments folding to rear when chelicerae inserted in plant tissue. Cephalothoracic shield with two or no dorsal setae; when present these setae always projecting forward in some degree. Abdomen usually robust, with or without dorsoventral differentiation on rings; caudal portion often attenuate; abdomen never with anterior subdorsal setae. Females genital apodeme projecting forward from base, either broadly truncate anteriorly or somewhat acuminate; female genital coverflap usually without ribs. Habit: leaf vagrant mites or rust mites.

Type genus: Rhyncaphytoptus Keifer, Bul. Cal. Dept. Agr. 28(2):8 1939

Examples of genera -

Diptilomiopus Nalepa, 1917
Rhinophytoptus Liro 1943
Quadracus K. 1944
Diptacus K. 1951
Rhynacus K. 1951
Catarhinus K. 1959

Designations on the plates

AP1 - internal female genitalia
CS - caudal setae
D - dorsal view of mite
DA - dorsal view of anterior section
ES - lateral surface structures
F - featherclaw
GF1 - female genitalia and coxae
L1 - anterior leg
S - side view of mite
SA - side view of anterior part of mite

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